

Reed, Angel

From: Schendel, John
Sent: Tuesday, March 23, 2010 1:46 PM
To: bo.li@battaenv.com; ncbatta@battaenv.com
Cc: Turner.Nardina@epamail.epa.gov; Ceron.Leonardo@epamail.epa.gov; Mayer, Randy; Reed, Angel; 'jones.katrina@epa.gov'; Harrigan, Sandra; Johnson, Andy; Kristiansen, Debbie
Subject: TTEMI-05-003-0078, Vermiculite Exfo Palmetto GAO 148: Submittal of Sample Spreadsheets and Chains-of-Custody to Laboratory
Attachments: TTEMI-05-003-0078_Vermiculite GAO 148_Batta COCs_Signed_031810.pdf; TTEMI-05-003-0078_Vermiculite GAO 148_A Air Samples_022210.xls

Dear Bo and Nardina,

Attached is one Excel spreadsheet for the air samples collected at the Woodruff, South Carolina (GAO 148) vermiculite site. Also attached is a Portable Document Format (PDF) file of the signed chains-of-custody (COC) forms that accompanied the sample shipment.

In the air sample spreadsheet:

- The spreadsheet presents all air samples collected at the site. You have received all but one sample designated in the spreadsheet as an Item No. 7 sample (this sample is shaded in blue); this sample was sent to another laboratory per direction from Nardina Turner.
- Color-shading (yellow or green) reveals those pairs of samples where both high-volume and low-volume air filter samples were collected at the same location and time. Regarding these sample sets, the spreadsheet has text in the "Remarks" column that clearly directs the laboratory to: 1) analyze the high-volume sample first (using direct analysis), and, if that sample is overloaded, then 2) proceed to analyze the low-volume sample (again, by direct analysis). As I understand it, if both the high-volume sample and low-volume sample in a given set are overloaded, then the laboratory is supposed to take the high-volume sample and subject it to indirect analysis (subject, I assume, to authorization from Nardina Turner).
- Tan shading marks field duplicate sample pairs. If associated with a high/low-volume sample set there is a pair of high/low-volume field duplicate samples, please treat the high/low-volume field duplicate sample set separately from the "original" high/low-volume sample set. That is, analyze field duplicate samples as if they were individual samples separate from their "original" sample counterparts.
- In one case of field duplicate sample collection, only a low-volume field duplicate sample (Activity-Based Round 2) was collected in association with an "original" high/low-volume sample set; this field duplicate sample had no associated high-volume co-located field duplicate sample. In retrospect, not collecting both high- and low-volume field duplicate samples in association with a high/low-volume sample set was a mistake, since it might result in the laboratory being unable to conduct field duplicate analyses that can be compared to one-another. I apologize for this, and if you have any questions as to how to deal with such a situation, please contact Nardina Turner.
- In addition, for one sample (56213), the air volume is given as a maximum as a result of air pump issues that were observed during sampling. We provide this air volume as a maximum because the true volume is uncertain and may lie below the reported value.
- Finally, for sample 56190, a notation has been made in the Excel spreadsheet indicating that the filter may have been damaged at the end of the sampling period when the filter cassette was pulled apart slightly when removing the cassette from the sample tubing. This notation is provided in case it influences the analysis of this sample.

Please call me at 404-373-8768 with any questions. Thanks, Bo and Nardina. - John

John Schendel, PhD | Quality Assurance Manager

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Tetra Tech EM Inc.

3/23/2010



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GAO 148 Air Samples

	Site No	Samp No	Location	Sample Date	Sample Time	Sample Type	Matrix	Sample Media	Volume	Volume Units	Sampler	Remarks	Container	No. Container	Storage	Preservation	Analytes	Rem No.
Lot Blanks	10-0127	56184	GAO 148	12/3/2009	Not applicable	Lot Blank	Air	0.8 um MCE, 25 mm dia.	Not applicable	Liters	John Schendel	Lot Blank, 0.8 um filter	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56185	GAO 148	12/3/2009	Not applicable	Lot Blank	Air	0.8 um MCE, 25 mm dia.	Not applicable	Liters	John Schendel	Lot Blank, 0.8 um filter	Cassette	1	Ambient	None	ISO 10312: 1995	6
Field Blanks	10-0127	56186	GAO 148	12/3/2009	Not applicable	Field Blank	Air	0.8 um MCE, 25 mm dia.	Not applicable	Liters	John Schendel	Field Blank, 0.8 um filter	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56187	GAO 148	12/3/2009	Not applicable	Field Blank	Air	0.8 um MCE, 25 mm dia.	Not applicable	Liters	John Schendel	Field Blank, 0.8 um filter	Cassette	1	Ambient	None	ISO 10312: 1995	6
Activity-Based Round 1 (Routine Facility Operations)	10-0127	56188	GAO 148	12/2/2009	1126	Field Sample	Air	0.8 um MCE, 25 mm dia.	1197.60	Liters	John Schendel	Activity-Based, Perimeter Upwind, High Volume. Analyze this sample first, and if overloaded, analyze sample 56190.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56189	GAO 148	12/2/2009	1126	Field Duplicate of 56188	Air	0.8 um MCE, 25 mm dia.	1188.60	Liters	John Schendel	Activity-Based, Perimeter Upwind, High Volume. Analyze this sample first, and if overloaded, analyze sample 56191.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56190	GAO 148	12/2/2009	1126	Field Sample	Air	0.8 um MCE, 25 mm dia.	352.80	Liters	John Schendel	Activity-Based, Perimeter Downwind, Low Volume. Analyze this sample only if sample 56189 is overloaded.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56191	GAO 148	12/2/2009	1126	Field Duplicate of 56190	Air	0.8 um MCE, 25 mm dia.	354.60	Liters	John Schendel	Activity-Based, Perimeter Downwind, High Volume. Analyze this sample first, and if overloaded, analyze sample 56193.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56192	GAO 148	12/2/2009	1126	Field Sample	Air	0.8 um MCE, 25 mm dia.	1194.60	Liters	John Schendel	Activity-Based, Perimeter Downwind, Low Volume. Analyze this sample only if sample 56192 is overloaded.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56193	GAO 148	12/2/2009	1126	Field Sample	Air	0.8 um MCE, 25 mm dia.	353.40	Liters	John Schendel	Activity-Based, Perimeter Downwind, High Volume. Analyze this sample first, and if overloaded, analyze sample 56197.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56194	GAO 148	12/2/2009	1126	Field Sample	Air	0.8 um MCE, 25 mm dia.	1194.60	Liters	John Schendel	Activity-Based, Perimeter Downwind, Low Volume. Analyze this sample only if sample 56194 is overloaded.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56195	GAO 148	12/2/2009	1126	Field Sample	Air	0.8 um MCE, 25 mm dia.	351.00	Liters	John Schendel	Activity-Based, Perimeter Downwind, High Volume. Analyze this sample first, and if overloaded, analyze sample 56201.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56196	GAO 148	12/2/2009	1126	Field Sample	Air	0.8 um MCE, 25 mm dia.	1188.60	Liters	John Schendel	Activity-Based, Perimeter Downwind, Low Volume. Analyze this sample only if sample 56196 is overloaded.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56197	GAO 148	12/2/2009	1126	Field Sample	Air	0.8 um MCE, 25 mm dia.	351.00	Liters	John Schendel	Activity-Based, Perimeter Downwind, High Volume. Analyze this sample first, and if overloaded, analyze sample 56203.	Cassette	1	Ambient	None	ISO 10312: 1995	6
Activity-Based Round 2 (Sweeping)	10-0127	56198	GAO 148	12/2/2009	1417	Field Sample	Air	0.8 um MCE, 25 mm dia.	1191.60	Liters	John Schendel	Activity-Based, Perimeter Downwind, Low Volume. Analyze this sample only if sample 56198 is overloaded.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56199	GAO 148	12/2/2009	1417	Field Sample	Air	0.8 um MCE, 25 mm dia.	353.40	Liters	John Schendel	Activity-Based, Perimeter Downwind, High Volume. Analyze this sample first, and if overloaded, analyze sample 56204.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56200	GAO 148	12/2/2009	1417	Field Sample	Air	0.8 um MCE, 25 mm dia.	1179.60	Liters	John Schendel	Activity-Based, Perimeter Downwind, Low Volume. Analyze this sample only if sample 56200 is overloaded.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56201	GAO 148	12/2/2009	1417	Field Sample	Air	0.8 um MCE, 25 mm dia.	357.56	Liters	John Schendel	Activity-Based, Perimeter Downwind, High Volume. Analyze this sample first, and if overloaded, analyze sample 56205.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56202	GAO 148	12/2/2009	1417	Field Sample	Air	0.8 um MCE, 25 mm dia.	1173.00	Liters	John Schendel	Activity-Based, Perimeter Downwind, Low Volume. Analyze this sample only if sample 56202 is overloaded.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56203	GAO 148	12/2/2009	1417	Field Sample	Air	0.8 um MCE, 25 mm dia.	358.68	Liters	John Schendel	Activity-Based, Perimeter Downwind, High Volume. Analyze this sample first, and if overloaded, analyze sample 56207.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56204	GAO 148	12/2/2009	1417	Field Sample	Air	0.8 um MCE, 25 mm dia.	1188.60	Liters	John Schendel	Activity-Based, Perimeter Downwind, Low Volume. Analyze this sample only if sample 56204 is overloaded.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56205	GAO 148	12/2/2009	1417	Field Sample	Air	0.8 um MCE, 25 mm dia.	362.95	Liters	John Schendel	Activity-Based, Backpack, High Volume. Analyze this sample first, and if overloaded, analyze sample 56207.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56206	GAO 148	12/2/2009	1417	Field Sample	Air	0.8 um MCE, 25 mm dia.	1186.20	Liters	John Schendel	Activity-Based, Backpack, Low Volume. Analyze this sample only if sample 56206 is overloaded.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56207	GAO 148	12/2/2009	1417	Field Sample	Air	0.8 um MCE, 25 mm dia.	351.00	Liters	John Schendel	Activity-Based, Backpack, Low Volume. This sample has no associated high volume collocated field duplicate sample.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56208	GAO 148	12/2/2009	1417	Field Duplicate of 56207	Air	0.8 um MCE, 25 mm dia.	351.00	Liters	John Schendel		Cassette	1	Ambient	None	ISO 10312: 1995	6

GAO 148 Air Samples

	Site No	Samp No	Location	Sample Date	Sample Time	Sample Type	Matrix	Sample Media	Volume	Volume Units	Sampler	Remarks	Container	No. Container	Storage	Preservation	Analysis	Item No.
Site Daily Background	10-0127	56210	GAO 148	12/3/2009	1057	Field Sample	Air	0.8 um MCE, 25 mm dia.	1572.80	Liters	John Schendel	Site Daily Background	Cassette	1	Ambient	None	ISO 10312: 1995	6
Activity-Based Round 3 (Raking)	10-0127	56210	GAO 148	12/3/2009	1057	Field Sample	Air	0.8 um MCE, 25 mm dia.	1207.20	Liters	John Schendel	Activity-Based, Perimeter Upwind, High Volume. Analyze this sample first, and if overloaded, analyze sample 56211.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56211	GAO 148	12/3/2009	1057	Field Sample	Air	0.8 um MCE, 25 mm dia.	348.00	Liters	John Schendel	Activity-Based, Perimeter Upwind, Low Volume. Analyze this sample only if sample 56210 is overloaded.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56212	GAO 148	12/3/2009	1057	Field Sample	Air	0.8 um MCE, 25 mm dia.	1188.60	Liters	John Schendel	Activity-Based, Perimeter Downwind, High Volume. Analyze this sample first, and if overloaded, analyze sample 56213.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56213	GAO 148	12/3/2009	1057	Field Sample	Air	0.8 um MCE, 25 mm dia.		Liters	John Schendel		Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56214	GAO 148	12/3/2009	1057	Field Sample	Air	0.8 um MCE, 25 mm dia.	1191.80	Liters	John Schendel	Activity-Based, Perimeter Downwind, High Volume. Analyze this sample first, and if overloaded, analyze sample 56215.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56215	GAO 148	12/3/2009	1057	Field Sample	Air	0.8 um MCE, 25 mm dia.	352.20	Liters	John Schendel	Activity-Based, Perimeter Downwind, Low Volume. Analyze this sample only if sample 56214 is overloaded.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56216	GAO 148	12/3/2009	1057	Field Sample	Air	0.8 um MCE, 25 mm dia.	1173.00	Liters	John Schendel	Activity-Based, Perimeter Downwind, High Volume. Analyze this sample first, and if overloaded, analyze sample 56217.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56217	GAO 148	12/3/2009	1057	Field Sample	Air	0.8 um MCE, 25 mm dia.	351.80	Liters	John Schendel	Activity-Based, Perimeter Downwind, Low Volume. Analyze this sample only if sample 56216 is overloaded.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56218	GAO 148	12/3/2009	1057	Field Sample	Air	0.8 um MCE, 25 mm dia.	1183.80	Liters	John Schendel	Activity-Based, Backpack, High Volume. Analyze this sample first, and if overloaded, analyze sample 56219.	Cassette	1	Ambient	None	ISO 10312: 1995	6
	10-0127	56219	GAO 148	12/3/2009	1057	Field Sample	Air	0.8 um MCE, 25 mm dia.	342.60	Liters	John Schendel	Activity-Based, Backpack, Low Volume. Analyze this sample only if sample 56218 is overloaded.	Cassette	1	Ambient	None	ISO 10312: 1995	6

CHAIN OF CUSTODY RECORD

Site #: 10-27 ϕ

Contact Name: John Schendel

Contact Phone: 678-775-3089

No: 10-127-03/18/10-0003

Lab: **BATTA Environmental Assoc., Inc.**

Lab Phone: 302-737-3376

Lab #	Sample #	Location	Analyses	Matrix	Sample Media	Sample Type	Collected	Sample Time	Numb Cont	Container	Preservative	Volume	Vol Units
	56184	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Lot Blank	12/3/2009	0	1	Cassette	None	0	Liters
	56185	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Lot Blank	12/3/2009	0	1	Cassette	None	0	Liters
	56186	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Blank	12/3/2009	0	1	Cassette	None	0	Liters
	56187	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Blank	12/3/2009	0	1	Cassette	None	0	Liters
	56188	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1126	1	Cassette	None	1197.6	Liters
	56189	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Duplicate of 56188	12/2/2009	1126	1	Cassette	None	1188.6	Liters
	56190 (a)	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1126	1	Cassette	None	352.8	Liters

Special Instructions: Refer to instructions on sample analysis contained in Tetra Tech's Excel spreadsheet and in the EPA's Request for Analytical Services.

(a) = Filter may be damaged. See Excel spreadsheet, Page 1

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CHAIN OF CUSTODY #[illegible]

Site #: 10-127

Contact Name: John Schendel

Contact Phone: 678-775-3089

Lab: BATA Environmental Assoc., Inc.

Lab Phone: 302-737-3376

Lab #	Sample #	Location	Analyses	Matrix	Sample Media	Sample Type	Collected	Sample Time	Numb Cont	Container	Preservative	Volume	Vol Units
	56191	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Duplicate of 56190	12/2/2009	1126	1	Cassette	None	354.6	Liters
	56192	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1126	1	Cassette	None	1194.6	Liters
	56193	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1126	1	Cassette	None	353.4	Liters
	56194	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1126	1	Cassette	None	1194.6	Liters
	56195	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1126	1	Cassette	None	351	Liters
	56196	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1126	1	Cassette	None	1188.6	Liters
	56197	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1126	1	Cassette	None	351	Liters

Special Instructions: Refer to instructions on sample analysis contained in Tetra Tech's Excel spreadsheet and in the EPA's Request for Analytical Services.

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Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
Ship papers to lab.	John Shandell	3/18/10									

CHAIN OF CUSTODY RECORD

Site #: 10-127

Contact Name: John Schendel

Contact Phone: 678-775-3089

No: 10-127-03/18/10-0003

Lab: BATTA Environmental Assoc., Inc.

Lab Phone: 302-737-3376

Lab #	Sample #	Location	Analyses	Matrix	Sample Media	Sample Type	Collected	Sample Time	Numb Cont	Container	Preservative	Volume	Vol Units
	56198	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1417	1	Cassette	None	1191.6	Liters
	56199	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1417	1	Cassette	None	353.4	Liters
	56200	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1417	1	Cassette	None	1179.6	Liters
	56201	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1417	1	Cassette	None	357.56	Liters
	56202	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1417	1	Cassette	None	1173	Liters
	56203	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1417	1	Cassette	None	358.68	Liters
	56204	GAO 148	ISO 10312: 1995	Air	0.8 um MCE, 25 mm dia.	Field Sample	12/2/2009	1417	1	Cassette	None	1188.6	Liters

Special Instructions: Refer to instructions on sample analysis contained in Tetra Tech's Excel spreadsheet and in the EPA's Request for Analytical Services.

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